

XXV. International RESER Conference: Host country impact of services FDI: the case of Visegrad countries

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This paper contains the main results from a work-in-progress research on the impact of three selected services sector FDI on various host country characteristics in the case of the four Visegrad countries. FDI in three service sectors: financial services, ICT-related services and business services are analysed, which differ in terms of their predominant horizontal or vertical nature. We found both the employment effect and export effect being significant only in the case of the predominantly vertical business services FDI. Furthermore, we analysed the impact of financial FDI on the economy, which we found significant for GFCF with considerable country differences especially after the crisis.

1. Introduction

Services sectors have been important “hosts” to inward foreign direct investments (FDI) in former transition economies and among them in Hungary. In the nineties their main aim was to supply the domestic market of the host country with various services, which were unavailable or less developed in the pre-transition era. Thus their main motivation was market-seeking and they can be characterised as horizontal FDI. Starting from around the beginning of the years 2000, more and more FDI projects arrived to Hungary, the main aim of which was to build up export capacities in certain service sectors relying mainly on the abundantly available mid- to high-skilled local labour with relatively low wages – thus the efficiency-seeking motive has become increasingly important for services foreign investors and vertical FDI projects mushroomed. While the host country impact of manufacturing FDI is analysed extensively in various areas, the number of studies dealing with services FDI is much less numerous, especially in fields such as exports or employment and especially in former transition economies.

The main aim of the research is to analyse the impact of FDI on growth, export and employment in selected service sectors of the host country. Three service sectors: financial services, ICT-related services and business services were analysed in the case of Hungary. The three service sectors were selected, because i) they are important host sectors to FDI in Hungary; ii) they differ to a great extent in terms of their export-intensity (export/sales) ratios: business services being highly export-oriented, financial services sell their products mainly on the domestic market, while ICT-related services can be positioned in-between the other two sectors. Furthermore they can be classified as predominantly horizontal (financial), confluent horizontal and vertical (ICT-related) and predominantly vertical (business services).

2. Background: theory and literature

FDI is of outstanding importance for the CEE countries and among them Hungary. FDI inflows have increased in the CEE in the past 20 to 25 years to become the most common type of capital flows. FDI inflows into CEE economies has been a vital factor in the first stage of privatisation, and FDI became the predominant type of incoming capital investment in the first stage of the economic transition. (See among others Holland et al., 2000 or Kalotay, 2010.) This process not only was to facilitate the restructuring and transformation of centrally planned economies but also the privatization process, i.e. the increase of the share of private ownership at the expense of state-ownership. In services, the banking and insurance sector and later other business services became the primary targets of strategic foreign investors, resulting in significant inflows of FDI in these sectors, connected mainly to the privatisation of state-owned banks and insurance companies in the financial sector and to mainly greenfield projects in the other services sectors. Similarly to global processes foreign investors' entry has been geographically/regionally concentrated, and the main investors have come from traditional/strong economic and trading partner countries (from mainly eurozone countries) of the host countries.

The impact of FDI on the host economy is widely analysed. In theory, companies with foreign participation may affect positively the economic performance of the host country. (Blomström, Kokko, 1997) Their role is of special importance in the case of an economy in transition. According among others to Lankes, Venables (1996) FDI has often been viewed as a potential catalyst for the economic transition. It can accelerate economic development and transition from a planned to the market economy. It may increase the production base in a country, which lacks capital and new investments. FDI may increase productivity; it can raise the level of competitiveness. It can transfer technology and know-how and spread managerial and marketing skills by transactions with domestic firms. It contributes to the restructuring of existing enterprises. It may help the development of markets, relevant behaviour of economic agents, a market based business culture and market institutions. However, these positive impacts do not occur automatically. Companies with foreign participation may form a separate island in the economy, having very limited contacts with local enterprises. They may conserve the technological backwardness of the host country by transferring low value-added activities. They may make the host country overspecialised on a few products thus exposing it to an exceeding extent to the business cycles of the world economy. They may cause political problems as well. The responsibility of the economic policy of the government lays in trying to divert the balance towards the positive impacts of FDI. Blomström and Kokko (1997) identified channels for the FDI spillovers, as backward linkages, forward linkages, training of employees and demonstration and competition effects. Venables and Barba Navaretti (2004) distinguish between the impact on the host countries of vertical and horizontal FDI.

Empirical evidence is inconclusive regarding the positive impact of FDI on the host economy. In many cases, empirical analysis could not show a positive and/or significant relationship between FDI and economic growth. For example in the case of studies analysing data for a group of countries, no evidence of a positive impact of FDI on growth is found by de Mello (1999), Crankovic and Levin (2000) or Lipsey (2000)). On the other hand, Borensztein, de Gregorio and Lee (1998) showed, that

the impact of FDI can be positive on economic growth, depending on the level of human capital and on the absorbing capacity in the host economy. If the quality of human capital reaches a threshold level, FDI can significantly increase the rate of economic growth. Hermes and Lensink (2000) presented similar results. They emphasized that not only the level of human capital, but also that of the financial markets must reach a certain threshold level. Greenaway and Görg (2001) over-viewed over 30 empirical surveys on potential positive growth effects of FDI in various countries. One main conclusion of their paper was that positive and negative impacts usually simultaneously affect host economies. The interference of the two may eliminate measurable positive impacts. Majcen et al (2003) drew similar conclusion after an analysis of spillover effects in transition economies. Campos and Kinoshita (2002) found that FDI affected economic growth positively and significantly in the period between 1990 and 1998 in transition economies. Gorodnichenko et al. (2013) showed using firm-level data, that the various channels of FDI spillovers differ in their significance, as well as sectors, FDI source and characteristics of the business environment, education of workers etc. affect the impact of FDI on the host economy. Iwasaki and Tokunaga (2014) prepared a meta-analysis of studies analysing the macroeconomic impacts of FDI in transition economies and found that the effect size and statistical significance of the estimates depend on study conditions: especially the estimation period, data type, estimator, and type of FDI are important factors that affect the heterogeneity of the results. Their main conclusion is that further rigorous research is needed to identify the true effect.

The impact of services FDI on former transition economies is relatively rarely analysed. Generally, Aykut and Sayek (2007) show that the sector composition of FDI has an effect on its growth impact. Eschenbach and Hoekman (2005) found that reforms in services policies result in a higher inflow of FDI into these sectors and thus positively affect the post-1990 economic performance of transition economies. Riedl (2010) found similar results, though she assumed that services FDI is almost exclusively market-seeking. Gorodnichenko et al. (2013) showed that services firms benefit more from FDI. The impact of business services FDI on the local economy, emphasizing the vertical nature of it, was presented by Sass (2011), showing that spillovers are scarce because backward and forward linkages with indigenous firms remain limited. Hardy et al. (2011) compare the local impact of horizontal and vertical business services in the Czech Republic, Hungary and Slovakia. They show the differences in local impact, stating among others that the most salient static impacts of these investments are on the labour market, where horizontal investments provide fewer, but more skilled jobs than vertical investments. Gál (2004) analysed financial services FDI in Hungary from that point of view.

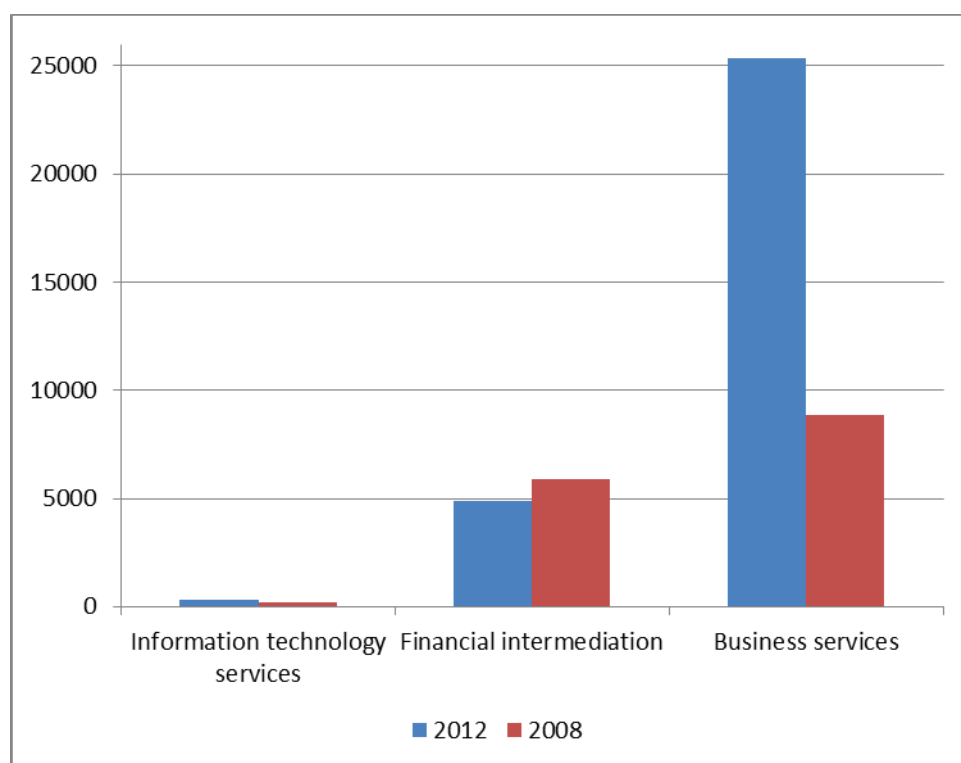
Overall, there are numerous studies analysing the impact of FDI on the host economy, but regarding the nature of that impact, the evidence is inconclusive. On the other hand, there are only a few studies on the impact of services FDI on the host economy, especially for former transition economies.

3. Methodology

Measurement and data problems are especially widespread in services, and in certain services sub-sectors. (See e.g. Sass and Fifeekova, 2011 for business services in post-transition economies.) FDI and export data are especially affected (see e.g.

Pindyuk, 2008 or Francois et al., 2009). The main aim of this section is to analyse the impact of FDI on growth, export and employment in selected service sectors of the host country. Three service sectors: financial services, ICT-related services and business services were analysed in the case of Hungary and the other three Visegrad countries. The three service sectors were selected, because they are important host sectors to FDI. In 2012, business services represented 32.3 % of total inward FDI stock, financial services: 6.2% and ICT-related services 0.4% in Hungary. (Chart 1) These are important host sectors in other CEE countries as well, especially for the other three Visegrad countries: the Czech Republic, Poland and Slovakia. (Sass, Fifekova, 2011)

Chart 1 FDI stock in selected service sub-sectors in Hungary, 2008 and 2012, million euros



Source: Hungarian National Bank, <http://www.mnb.hu/Statisztika/statisztikai-adatok-informaciok/adatok-idosorok/vii-kulkereskedelem/kozvetlentoke-befektetesek/bpm5-modszertan-szerinti-adatok-2013-ig-archiv>

Furthermore, they differ to a great extent in terms of their export-intensity (export/sales) ratios: business services being highly export-oriented, financial services sell their products mainly on the domestic market, while ICT-related services can be positioned in-between the other two sectors. Connected to this, the three selected service industries are different in terms of their horizontal or vertical nature: financial services are predominantly horizontal, offering the same services as in the other home and host countries of the investing multinational (bank or insurance company). At the same time, ICT-related services are confluent horizontal and vertical, where not only the same services are offered, but there is another type of motive and project: where activities are located in the host economy in order to minimise costs and the output is “fed back” into the activity of the multinational company and thus (intra-company) export is occurring. Furthermore, the third selected service industry, business services is predominantly vertical. As a “benchmark”, we also added data on an

important manufacturing sector, playing a significant role in all Visegrad FDI stock and economy: machinery.

As for the methodology, we rely on the analysis of a panel dataset containing time series data for the period 1990/95-2013 on FDI inflows, stock, FDI share on GFCF, sectoral FDI, export and import, employment and various composite indicators proxying the level of development of the analysed services sectors. Using SPSS, we examined how FDI in a given sector impacts upon employment, exports and the other variables. Basically we have chosen two options in the framework of multivariate regression analysis run by SPSS for detecting the sectoral effects of FDI. Both the selected explanatory variables and dependent variables have a sector-related nature. FDI impact can be measured on exports or employment within the selected sectors as OECD database for Visegrad countries with fine data granularity available for analysis. Export and employment in this case are dependent variables. Another option when the sector-specific variables are explanatory variables (eg. FDI inflows into the financial sector), while the dependent variable is selected from macro economic data (e.g. GDP growth rate). The second case is a much stronger argument, which presupposes that FDI has a direct impact on growth, not just on the sector itself, but also has implications for the whole economy. First we examined the FDI effects on the financial, ICT, other business services, and selected manufacturing sectors, then we tested the hypothesis whether financial sector FDI has a much more significant effects on the whole economy. The analysis is performed in three distinct periods (transition: 1994-1999, boom: 2001-2007, crisis: 2008-2011). We expected that on the basis of the theory, that both vertical and horizontal services FDI sectors increase employment and while vertical increases exports, horizontal decreases it.

4. Results

As it was described in the methodology section, we have carried out various calculations on a database containing data for the four Visegrad countries: the Czech Republic, Hungary, Poland and Slovakia. The results of our calculations can be found in Table 1.

Table 1 Impact of FDI on employment and export in different sectors in the Visegrad countries between 2001-2011

Dependent variables	Sectoral employment within the total employment		Dependent variables	Export as % of GDP	
Explanatory variables	p-values	Regression coefficient	Explanatory variables	p-values	Regression coefficient
Financial sector FDI , % of GDP	.919	-.035	Financial sector FDI , % of GDP	.994	-.002
ICT sector FDI FDI , % of GDP	.321	-.351	ICT sector FDI FDI , % of GDP	.087	-.579

Business services FDI FDI , % of GDP	.284	.351	Business services FDI FDI , % of GDP	.034	.645
Machinery FDI FDI , % of GDP	.686	.134	Machinery FDI FDI , % of GDP	.227	.471

Source: FDI: http://stats.oecd.org/Index.aspx?DatasetCode=FDI_FLOW_INDUSTRY

Export:

http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bop_its_det&lang=en

Employment: OECD:

Labour/Labour Force Statistics/Annual labour force statistics/Employment by activities and status

The analysis tried to assess the magnitude and significance of the impact of FDI in the three selected services sectors and for comparative reasons the one selected manufacturing sector. In the case of employment we cannot find extremely low p-value, which means the FDI inflows do not exert significant influence on the employment growth of the particular sectors. The employment effects of FDI were the lowest in the financial and the automotive manufacturing sectors. The increase of employment in the machinery sector has a low correlation coefficient with sectoral FDI as a percentage of the GDP, which means that due to the huge import generated by local car manufacturing and other assembly plants resulted in a kind of crowding out effect in the labor market as well. This has a direct impact on the domestic supply chain manufacturers which decreased the labour force also in the related industrial sectors (e.g. metal production).

At the same, in the case of the financial sector not only the lack of significance of the correlation between the financial sector FDI stock as a percentage of GDP and employment is the case but the regression coefficient is negative indicating the decrease in financial sector labour force. This is the direct consequence of the general consolidation, technological upgrading and to a large extent the direct result of the crisis affecting heavily the employment of financial sector in the Visegrad countries, and within this group in particular in Hungary.

The relatively the largest p values (although above the 10% threshold) were found in the case of the business services and ICT services. However in the case of business services there is a positive impact on employment growth while negative regression coefficient in the ICT means that FDI increase leads to a decrease in the employment. Although this can be tested by the Granger's causality test in the future, but this negative coefficient is probably the consequence of the less labour intensive character of this particular sector. In the Visegrad countries the expansion of business services is apparent, the number of projects and employment increased substantially in recent years (see e.g. Hardy et al., 2011). Thus we can conclude here that vertical type FDI in services led to an increase in employment, while the horizontal and confluent types there is no such effect detected.

If we move to the examination of the impact of the sectoral FDI on the relative export intensity of the particular sectors we can find much lower p-values indicating the largest significance of FDI in business services (0.034) and in ICT services (0.087). Business services are proved to be the largest export-oriented sector (with the largest correlation coefficient: 0.645) not only in comparison with all the other sectors in question but also with the ICT sector which has a negative coefficient. This means confluent horizontal and vertical FDI in the ICT sector still follow the market demand led strategy (domestic market oriented) and not necessarily leads to export in the ICT

sector, rather, it generates imports. Similar is the case with the predominantly horizontal financial services. On the other hand, the mainly vertical type business services FDI generates exports. These findings are in line with what was expected on the basis of theory, however, for the confluent case a higher positive export impact was expected.

Table 2 *Impact of financial sector FDI on macro-economic performance between 2008-2011*

Dependent variables	GDP growth rate		GFCF	
	p-values	Regression coefficient	p-values	Regression coefficient
V4	.569	-.112	.002	.552
Czech R.	.196	-.555	.036	.786
Slovakia	.264	-.491	.019	.838
Poland	.699	-.180	.469	.331
Hungary	.544	-.280	.083	-.695

Explanatory variable: Share of Financial FDI

Sources: as in Table 1

If we take a closer look at the crisis period the previously mentioned country stability effects can be also applied to Czech Republic and Slovakia where the banking sector did not lose its financing ability even during the crisis. This is verified by positive and significant impacts of financial FDI both on the GNI per capita and GFCF. In the rest of the Visegrad countries financial FDI lost its significant explanatory effects.

Besides labour market and foreign trade impacts we analyzed the macro-economic impact of the financial FDI (as explanatory variables) choosing GDP growth rate, GNI per capita and gross fixed capital formation (GFCF) as dependent variables. (Table 2) Data were available for the period between 2001 and 2011 so we were able to distinguish between the economic boom (2001-2007) and the crisis (2008-2011) periods. Annex tables contain the results of the various calculations. To sum these up, on the Visegrad level we cannot find significant impact of financial FDI on the GDP growth and GNI per capita. We argue that the direct effect of the financial sector on economic growth and development cannot be detected during the period between 2001 and 2008. However, the impact of financial FDI on gross fixed capital formation is not only significant (0.002) but FDI has a positive impact on GFCF. (This is due to the direct financing effect of the banking sector). We can also measure this impact at the level of individual countries. We found positive and significant correlation in the cases of the Czech Republic and Slovakia where the banking sector has the strongest financing effect). In the case of Poland this correlation is non-significant while in Hungary significant and negative. This latter case means that financial FDI in Hungary did not finance the real economy but rather the household consumption. The second concern is that the allocation of foreign capital has been changing during the pre-crisis period as less foreign capital is directed to the private sector (through FDIs, loans) but more inflows are channelled via the public sector (through government bonds, EU funds), which can undermine the potential impact of financial FDI on growth and investments.

5. Conclusion

This paper contains the results of an ongoing research, where we tried to assess the impact of three selected services sector FDI on the local economy in the area of employment and exports in this case of the four Visegrad countries. We have selected three service sectors, which represent a relatively high share of the overall FDI stock on one hand and which are different in terms of being predominantly horizontal (financial services), vertical (business services) or confluent (IT-services) nature. Our preliminary findings are more or less in line with what could be expected on the basis of the theories in terms of the impact of these services FDI on exports: FDI in the sector with predominantly vertical projects, business services has a positive impact on exports, the sector with predominantly horizontal projects, financial services had no effect, while contrary to the findings, the confluent sector, IT-services we could not find a positive impact, which indicates that even in that sector, FDI projects are mainly horizontal and are attracted mainly by the domestic market of the analysed countries. In terms of the employment effect, surprisingly, it is only FDI in the sector with mainly vertical projects, business services, which had a positive impact on employment, while in the horizontal sectors no such effect was traced. This is contrary to the findings of other research.

The second part of the research tried to assess the impact of financial services FDI on the Visegrad countries as a group and at the individual country level. The two main areas analysed were GDP growth and gross fixed capital formation. Here we assumed that financial services FDI has a much stronger impact on the economy as a whole compared to other industries and sectors, via the impact of the financial sector on the economy. We found a positive impact of financial FDI on GFCF in the country group, but individual countries differ to a great extent.

Further research will address the directions of causality and it will include the extension of the variables in order to find more clear explanations about how vertical and horizontal services FDI impacts upon the host economies and overall, what the impact of services FDI can be on host economies.

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Annex tables

1. table The impact of financial FDI on employment

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,060	,148		13,909	,000
	Financial Sector FDI, % of GDP	-,009	,086	-,035	-,104	,919
	2009 Dummy	,008	,148	,022	,057	,956
	2010 Dummy	-,038	,157	-,099	-,241	,814
	2011 Dummy	,068	,141	,178	,484	,638

a. Dependent Variable: Financial Sector Labour force Inside Full labour force

Table 2 The impact of financial FDI on exports

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,182	,034		5,406	,000
	Financial Sector FDI, % of GDP	,000	,020	-,002	-,007	,994
	2009 Dummy	-,044	,034	-,459	-1,293	,223
	2010 Dummy	-,042	,036	-,443	-1,178	,263
	2011 Dummy	-,042	,032	-,446	-1,320	,213

a. Dependent Variable: Financial Sector Export, % of GDP

Table 3 The impact of ICT services FDI on employment

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,088	,184		11,373	,000
	2009 Dummy	-,134	,281	-,183	-,475	,644
	2010 Dummy	,105	,253	,143	,415	,686
	2011 Dummy	,012	,277	,016	,043	,967
	Telecommunication and IT FDI in % of GDP	-,393	,378	-,351	-1,039	,321

a. Dependent Variable: Telecommunication and IT Labour force Inside Full labour force

Table 4 The impact of financial services FDI on exports

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,723	,161		4,490	,001
	2009 Dummy	-,137	,247	-,195	-,557	,589
	2010 Dummy	,079	,222	,112	,355	,730
	2011 Dummy	-,020	,243	-,029	-,083	,935
	Telecommunication and IT FDI in % of GDP	-,624	,332	-,579	-1,880	,087

a. Dependent Variable: Telecommunication and IT Export in % of GDP

Table 5 The impact of business services FDI on employment

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,344	,130		18,007	,000
2009 Dummy	,061	,183	,115	,334	,745
2010 Dummy	,047	,183	,088	,255	,803
2011 Dummy	,025	,195	,046	,126	,902
SSC, other business activities FDI, % of GDP	,013	,011	,351	1,126	,284

a. Dependent Variable: SSC, other business activities, Labour force Inside Full labour force

Table 6 The impact of business services FDI on exports**Coefficients^a**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,102	,572		3,678	,004
2009 Dummy	-,006	,805	-,002	-,007	,994
2010 Dummy	,302	,805	,111	,376	,714
2011 Dummy	-,343	,856	-,126	-,400	,697
SSC, other business activities FDI, % of GDP	,119	,049	,645	2,417	,034

a. Dependent Variable: SSC, other business activities Export, % of GDP

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